CLIMATE NEWS

From Sheldon Whitehouse, Barbara Boxer, and Jeff Merkley
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Climate Change Hits Close to Home in Northwest Indiana

Ryan Richardson knows all too well how climate change can affect peoples' lives at the local level. He is the Vice President of Operations at Indiana's County Line Orchard, which lost its entire apple crop last season due to extreme weather. By mid-March, "the trees were already breaking out of dormancy a full 35 to 40 days ahead of schedule," said Richardson, and the May frost "was so cold, it killed the seeds that were in the apples." This reduced revenue and delayed expansion plans, and it forced the the orchard to buy apples from as far away as Washington and Colorado to sell to customers at a much higher cost. Bob Daum, Chief of Resource Management for Indiana Dunes National Lakeshore, said climate change is already taking a toll on the park. Last year's drought and increasingly warmer winters have brought Lake Michigan's water levels to record lows, which made the park's beaches wider and caused the dunes to shift more rapidly. Daum says Mount Baldy shifted 18 to 20 feet in 2012 as a result, about three times more than in an average year. Mount Baldy is a major tourist attraction in the park, which generated nearly $60 million for the local economy in 2012. *(The Times of Northwest Indiana)*

East Coast May Be More Sensitive to Ocean Acidification

Distinct coastal waters will respond to an influx of carbon dioxide (CO_2) in different ways, according to a recent study published in *Limnology and Oceanography*. Ocean acidification—which can occur when waters absorb excess CO_2—disproportionately affects species like oysters, snails, pteropods, and coral, as they cannot effectively form shells in a more acidic environment. Researchers found the Gulf of Mexico to be more resistant to ocean acidification, while the waters in the Gulf of Maine make it more vulnerable than any other along the eastern seaboard. "If you put the same amount of CO_2 into both the Gulf of Maine and the Gulf of Mexico right now, the ecosystem in the Gulf of Maine would probably feel the effects more dramatically," says the study's lead author, Z. Aleck Wang of Woods Hole Oceanographic Institution (WHOI). Wang says this raises big questions about how species of marine life—many of which are important to New England's fishing and shellfish industries—will fare in the future. *(WHOI/ lo.2013.58.1.0325)*

UNEP Group Ranks Climate Change as Top Market Externality

According to a new study by a United Nations Environmental Programme (UNEP) business group, business activities in sectors with high environmental impacts (such as forestry, agriculture, fishing, mining, oil and gas extraction, and electricity generation) annually account for $7.3 trillion in uncompensated environmental and public health external costs. The study found that the majority of the costs (38 percent) are attributable to climate change, followed by water use (25 percent), land use (24 percent), and air pollution (7 percent). The report states that some business activities do not generate sufficient profit to cover their natural resource use and pollution costs. However, businesses and investors can take account of these natural capital costs in their decision-making to manage risk and gain competitive advantage. "Forward-looking companies are already recognizing that the key to competitiveness in an increasingly resource-constrained world will hinge in large part on escalating natural resource efficiencies and cutting pollution footprints," said Under-Secretary-General and UNEP Executive Director Achim Steiner. *(EESI)*

Antarctic Ice Melting at Record Rate, Study Shows

Summer ice is melting at a faster rate in the Antarctic Peninsula than at any time in the last 1,000 years, according to new research published in the journal *Nature Geoscience*. The evidence comes from a 364-meter ice core containing a record of freezing and melting over the previous millennium, which scientists say suggests a link between the region's accelerated melting and man-made global warming. Lead researcher Dr. Nerilie Abram said that "while temperatures at this site increased gradually in phases over many hundreds of years, most of the intensification of melting has happened since the mid-20th century." Levels of ice melt on the Antarctic Peninsula were especially sensitive to rising temperature during the last century, he added. "Summer ice melt is a key process that is thought to have weakened ice shelves along the Antarctic Peninsula, leading to a succession of dramatic collapses, as well as speeding up glacier ice loss across the region over the last 50 years," said study co-author Dr. Robert Mulvaney. *(The Guardian/ngeo1787)*